Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-8. (canceled)

9. (currently amended) ~~The method of claim 8,~~ A method for buffering packets transmitted to an Infiniband port by an Infiniband device linked to the port, comprising:

providing a portion of a memory for buffering the packets, wherein the portion has a size A;

transmitting flow control credits to advertise to the device buffering resources of a size B, wherein B is greater than A;

determining when the portion is filled with a predetermined amount of the packets;

transmitting flow control credits to the device to stop transmission of the packets in response to said determining; and

providing a second memory for buffering the packets transmitted subsequent to said determining, wherein said providing a second memory comprises providing a second memory having a size C, wherein said size C is based on an amount of data that may be transmitted to the port during a latency time required to stop transmission of the packets in response to said determining.

10. (original) The method of claim 9, wherein said latency time comprises an approximate amount of time required to perform said transmitting flow control credits to the device to stop transmission of the packets in response to said determining.

11. (original) The method of claim 10, wherein said transmitting flow control credits to the device to stop transmission of the packets in response to said determining comprises transmitting a flow control packet with zero credits for each of a plurality of virtual lanes configured on the port.

12. (original) The method of claim 9, wherein said latency time comprises an approximate amount of time required for the port to transmit a maximum-sized Infiniband data packet to the device.

13. (original) The method of claim 9, wherein said latency time comprises an approximate amount of time required for the device to transmit a maximum-sized Infiniband data packet to the port.

14. (original) The method of claim 9, wherein said latency time comprises an approximate amount of time required for the device to respond to said transmitting flow control credits to the device to stop transmission of the packets in response to said determining.

15. (currently amended) ~~The method of claim 8~~ A method for buffering packets transmitted to an Infiniband port by an Infiniband device linked to the port, comprising:
providing a portion of a memory for buffering the packets, wherein the portion has a size A;
transmitting flow control credits to advertise to the device buffering resources of a size B, wherein B is greater than A;
determining when the portion is filled with a predetermined amount of the packets;

transmitting flow control credits to the device to stop transmission of the packets in response to said determining; and

providing a second memory for buffering the packets transmitted subsequent to said determining, wherein said providing a second memory comprises providing a second memory having a size C, wherein said size C is between approximately one Kilobyte and approximately sixteen Kilobytes.

16. (canceled)

17. (currently amended) ~~The method of claim 16~~ A method for buffering packets transmitted to an Infiniband port by an Infiniband device linked to the port, comprising:
providing a portion of a memory for buffering the packets, wherein the portion has a size A;
transmitting flow control credits to advertise to the device buffering resources of a size B, wherein B is greater than A;
determining when the portion is filled with a predetermined amount of the packets;

transmitting flow control credits to the device to stop transmission of the packets in response to said determining; and

buffering the packets transmitted by the device subsequent to said determining in a reserved amount of the portion of the memory, wherein said reserved amount is beyond the predetermined amount, wherein said reserved amount is between approximately eight Kilobytes and approximately sixteen Kilobytes.

18. (currently amended) ~~The method of claim 16~~ A method for buffering packets transmitted to an Infiniband port by an Infiniband device linked to the port, comprising:

providing a portion of a memory for buffering the packets, wherein the portion has a size A;

transmitting flow control credits to advertise to the device buffering resources of a size B, wherein B is greater than A;

determining when the portion is filled with a predetermined amount of the packets;

transmitting flow control credits to the device to stop transmission of the packets in response to said determining; and

buffering the packets transmitted by the device subsequent to said determining in a reserved amount of the portion of the memory, wherein said reserved amount is beyond the predetermined amount, wherein said reserved amount is based on an amount of data that may be transmitted to the port during a latency time required to stop transmission of the packets in response to said determining.

19. (original) The method of claim 18, wherein said latency time comprises an approximate amount of time required for the port to transmit a flow control packet for each of a plurality of virtual lanes configured on the port.

20. (original) The method of claim 18, wherein said latency time comprises an approximate amount of time required for the port to transmit a maximum-sized Infiniband data packet to the device.

21. (original) The method of claim 18, wherein said latency time comprises an approximate amount of time required for the device to transmit a maximum-sized Infiniband data packet to the port.

22. (original) The method of claim 18, wherein said latency time comprises an approximate amount of time required for the device to respond to said transmitting flow control credits to the device to stop transmission of the packets in response to said determining.

23. (canceled)

24. (currently amended) ~~The method of claim 23~~ A method for buffering packets transmitted to an Infiniband port by an Infiniband device linked to the port, comprising:

providing a portion of a memory for buffering the packets, wherein the portion has a size A;

transmitting flow control credits to advertise to the device buffering resources of a size B, wherein B is greater than A;

determining when the portion is filled with a predetermined amount of the packets; and

transmitting flow control credits to the device to stop transmission of the packets in response to said determining, wherein said determining the portion of

the memory is filled a predetermined amount comprises determining an amount of free space in the portion of the memory drops below the predetermined amount, wherein said amount of free space is between approximately eight Kilobytes and approximately sixteen Kilobytes.

25. (canceled)

26. (currently amended) ~~The method of claim 1~~ A method for buffering packets transmitted to an Infiniband port by an Infiniband device linked to the port, comprising:

providing a portion of a memory for buffering the packets, wherein the portion has a size A;

transmitting flow control credits to advertise to the device buffering resources of a size B, wherein B is greater than A;

determining when the portion is filled with a predetermined amount of the packets; and

transmitting flow control credits to the device to stop transmission of the packets in response to said determining, wherein said providing a portion of a memory for buffering the packets comprises providing the memory in response to user input.

27. (canceled)

28. (currently amended) ~~The method of claim 1~~ A method for buffering packets transmitted to an Infiniband port by an Infiniband device linked to the port, comprising:

providing a portion of a memory for buffering the packets, wherein the portion has a size A;

transmitting flow control credits to advertise to the device buffering resources of a size B, wherein B is greater than A;

determining when the portion is filled with a predetermined amount of the packets; and

transmitting flow control credits to the device to stop transmission of the packets in response to said determining, wherein said transmitting flow control credits to advertise to the device buffering resources of a size B comprises advertising at least two maximum-sized Infiniband packets worth of flow control credits for each of a plurality of virtual lanes configured on the port.

29. (currently amended) ~~The method of claim 1 further comprising:~~ A method for buffering packets transmitted to an Infiniband port by an Infiniband device linked to the port, comprising:

providing a portion of a memory for buffering the packets, wherein the portion has a size A;

transmitting flow control credits to advertise to the device buffering resources of a size B, wherein B is greater than A;

determining when the portion is filled with a predetermined amount of the packets;

transmitting flow control credits to the device to stop transmission of the packets in response to said determining; and

configuring a plurality of virtual lanes on the port prior to said transmitting flow control credits to advertise to the device buffering resources of a size B.

30. (currently amended) The method of claim 29, wherein a product of a number of said plurality of virtual lanes and a number of bytes comprising two maximum-sized Infiniband packet exceeds size A.

31-32. (canceled)

33. (currently amended) ~~The method of claim 31~~A method for controlling flow of packets into a plurality of ports on an Infiniband device, comprising:

providing a memory for buffering the packets, wherein the memory has a size A;

transmitting flow control credits by the plurality of ports to advertise packet buffering resources of a size B, wherein B is greater than A; and

transmitting flow control credits by at least one of the plurality of ports to stop transmission of the packets into the at least one port in response to determining an amount of free space in the memory drops below a predetermined threshold, wherein said predetermined threshold is based on an amount of data that may be transmitted to the plurality of ports during a latency time required to stop transmission of the packets in response to said determining.

34-36. (canceled)

37. (currently amended) ~~The system of claim 35~~A system for buffering packets transmitted by a link partner linked to an Infiniband port, comprising:

a first memory, for buffering the packets from the port;

flow control logic, configured to advertise to the link partner more buffering resources than are available in said first memory for buffering the packets if space is available in said first memory to buffer the packets, and to advertise no buffering resources if no space is available; and

a second memory, coupled between the port and said first memory, for buffering the packets when no buffering resources are available in said first memory, wherein a size of said second memory is approximately an amount of data capable of being transmitted to the port during a latency time from when no buffering resources are available in said first memory to when the link partner stops transmitting the packets.

38-42. (canceled)

43. (currently amended) ~~The system of claim 41~~A system for buffering packets transmitted by a link partner linked to an Infiniband port, comprising:
a memory, for buffering the packets from the port;
a buffer controller, for monitoring an amount of free space in said memory; and

flow control logic, configured to advertise to the link partner more buffering resources than are available in said memory for buffering the packets from the port if said buffer controller indicates said amount of free space is above a predetermined threshold, wherein said predetermined threshold is approximately an amount of data capable of being transmitted to the port during a latency time from when said buffer controller indicates said amount of free space is below said predetermined threshold to when the link partner stops transmitting the packets.

44. (canceled)

45. (currently amended) ~~The system of claim 44~~A system for buffering packets transmitted by a link partner linked to an Infiniband port, comprising:
a memory, for buffering the packets from the port;
a buffer controller, for monitoring an amount of free space in said memory; and

flow control logic, configured to advertise to the link partner more buffering resources than are available in said memory for buffering the packets from the port if said buffer controller indicates said amount of free space is above a predetermined threshold, wherein said flow control logic is configured to advertise to the link partner said buffering resources for a plurality of virtual lanes configured on the port, wherein said memory has a size, wherein the number of said plurality of virtual lanes configured on the port multiplied by a size of at least two maximum-sized Infiniband data packets ~~substantially~~ exceeds said size of said memory.

46-49. (canceled)